

1 What is claimed is:

2 1. A method of displaying images using a wearable display device, comprising:

3 generating an inner region display signal;

4 determining at least one of a motion, brightness or color characteristic from the inner

5 region display signal;

6 generating an outer region display signal using the at least one motion, brightness or

7 color characteristic;

8 displaying an inner region of an image on a display using the inner region display

9 signal; and

10 displaying an outer region of the image on the display using the outer region display

11 signal, wherein the outer region is of substantially lower resolution than the inner region.

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13 2. The method of claim 1, wherein the step of generating an outer region display

14 signal comprises:

15 adjusting the outer region display signal so that the outer region of the image blends

16 with the inner region of the image.

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18 3. The method of claim 1, wherein the step of displaying an outer region of an image

19 comprises:

20 displaying an outer region of less than 5 cycles per degree resolution.

21
22 4. The method of claim 3, wherein the step of displaying an inner region of an

23 image comprises:

24 displaying a center of the inner region of at least 15 cycle per degree resolution.

1 5. The method of claim 3, wherein the step of displaying an outer region of an
2 image comprises:

3 illuminating an array of red, blue and green lights.
4

5 6. The method of claim 3, wherein the step of displaying an outer region of an
6 image comprises:

7 illuminating an array of white lights.
8

9 7. The method of claim 1, wherein the step of displaying an outer region of an image
10 comprises:

11 shining red, blue and green lights into a user's field of view.
12

13 8. A wearable display, comprising:
14 a display having an inner region and an outer region of substantially lower resolution
15 than the inner region; and

16 a controller operably coupled to the display, wherein the controller generates an
17 inner region display signal, and an outer region display signal using at least one of a
18 motion, brightness or color characteristic from the inner region display signal.
19

20 9. The display of claim 8, wherein the outer region is of less than 5 cycles per
21 degree resolution.
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23 10. The display of claim 8, wherein the inner region is of at least 15 cycle per
24 degree resolution at a center of the inner region.
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1 11. The display of claim 9, wherein the outer region comprises:

2 an array of red, blue and green lights.

4 12. The display of claim 9, wherein the outer region comprises:

5 an array of white lights.

7 13. A method of displaying images using a wearable display, comprising:

8 determining an amount of distortion for image signal data, the distortion acting to

9 distort a source image conveyed by the image signal data so that a field of view of the

10 source image is expanded;

11 adjusting the image signal data so that the source image conveyed by the image

12 signal data is distorted according to the determined amount of distortion;

13 generating a display signal using the adjusted image signal data; and

14 displaying an image on a display using the display signal.

16 14. The method of claim 13, wherein the step of adjusting the image signal data

17 comprises:

18 creating a distortion ratio between an inner region and an edge of the source image

19 of between 2:1 and 20:1.

21 15. The method of claim 14, comprising:

22 sampling a source image signal to obtain the image signal data.

24 16. A wearable display, comprising:

25 a display having an inner region and an outer region; and

1 a controller operably coupled to the display, wherein the controller obtains image
2 signal data from a source image signal and generates a display signal by determining an
3 amount of distortion for the image signal data, and adjusting the image signal data so that a
4 source image conveyed by the image signal data is distorted according to the determined
5 amount of distortion, the distortion distorting the source image so that a field of view of the
6 image is expanded to the outer region of the display.

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8 17. The display of claim 16, wherein the distortion ratio between an inner region
9 and an edge of the source image is between 2:1 and 20:1.

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11 18. The wearable display of claim 16, comprising:
12 an image source coupled to the controller, wherein the image source generates the
13 source image signal.

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15 19. The wearable display of claim 18, wherein the controller comprises:
16 a processor operably coupled to the image source, wherein the processor samples the
17 source image signal.

18
19 20. A wearable display, comprising:
20 a display for displaying images;
21 a controller operably coupled to the display, wherein the controller obtains image
22 signal data from a source image signal and generates a display signal for display by the
23 display; and
24 optics arranged in the wearable display, wherein the optics modify an image

1 displayed by the display by distorting an outer region of the image by a greater amount than
2 an inner region of the image so that a field of view of the image is increased.

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4 21. The wearable display of claim 20, wherein a distortion ratio between a portion
5 of the outer region and a portion of the inner region is between 2:1 and 20:1.

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